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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,245	04/26/2006	Takuya Tsukagoshi	127848	2491
25944 7590 10/31/2008 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
ASSAF, FAYEZ G				
ART UNIT		PAPER NUMBER		
2872				
MAIL DATE		DELIVERY MODE		
10/31/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/577,245

**Applicant(s)**

TSUKAGOSHI ET AL.

**Examiner**

Fayez G. Assaf

**Art Unit**

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 3, 6-9, 12 and 14-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 10, 11 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date 4/26/2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

Applicant's election **without traverse** of Species 1: Claims 1, 2, 5, 10, 11 and 13 in the reply filed on 7/9/2008 is acknowledged.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5, 10, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanabe et al. (JP 11-224043).

Regarding claims 1, 2, 10, 11, Tanabe discloses a multilayer holographic recording and reproducing method for holographically recording information on a multilayer holographic recording medium including a number of deposited holographic recording layers in each of which interference fringes can be formed by projecting an object beam and a

reference beam that are split from a laser beam (Fig. 1, Abstract) and for reproducing the recorded information by projecting a laser beam for reproduction, the method comprising: a process of recording the information by fixing a projection condition of one of the object beam and the reference beam and modulating the other for each of the holographic recording layers so that the holographic recording layers each have a different Bragg's condition (due to the change of the angle); and a process of projecting the laser beam for reproduction onto the deposited holographic recording layers with the same projection condition as the fixed projection condition of the one of the object beam and the reference beam (paragraph [0014]) to generate a diffraction beam in an upper holographic recording layer, additionally during the holographic recording, the information is recorded by fixing a projection condition of the reference beam and modulating the object beam for each of the holographic recording layers (claim 8); and the laser beam for reproduction having the same projection condition as that of the reference beam is projected onto the deposited holographic recording layers, the diffraction beams generated in the respective holographic recording layers by the projected beams are detected by two-dimensional photodetectors a number of which is equal to that of the holographic recording layers, and the

pieces of information are reproduced from light-detecting signals of the 15 two-dimensional photodetectors (paragraph [0050]). Tanabe does not explicitly disclose making a transmitted 0-th order diffraction beam to be projected onto a lower holographic layer one by one, thereby simultaneously or individually reproducing pieces of information from diffraction beams generated in the respective holographic recording layers by the projected beams.

However, such feature can be deduced from the reference as an option in reconstruction of the holograms.

It would have been obvious, at the time the invention was made, to a person having ordinary skill in the art to reconstruct the holograms in such manner (i.e. by a normal reference beam to the surface of the holographic medium) in order to simplify the optical alignment.

Regarding claims 5 and 13, Tanabe teaches modulating the angle of the object and reference beam for each holographic recording (claim 8).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

King et al. (US 2003/0039001 A1): The entire document.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faye G. Assaf whose telephone number is (571) 272-2307. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Fayez G. Assaf/  
Primary Examiner, Art Unit  
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October 27, 2008